Crisis or Opportunity: The Urgent Need for Defense Reform in the 21st Century

by

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United States Army War College Class of 2012

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USAWC CIVILIAN RESEARCH PROJECT

CRISIS OR OPPORTUNITY: THE URGENT NEED FOR DEFENSE REFORM IN THE 21ST CENTURY

by

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ABSTRACT

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The United States currently faces an unprecedented debt crisis that requires fresh thinking on National Security. As the nation is forced to address its fiscal challenges, the Department of Defense and Congress will face difficult choices if the nation is to maintain effective deterrence, reduce costs, and protect critical capabilities across the enterprise. Failure to make these difficult decisions will place the nation at significant risk and further squander shrinking resources.

This crisis presents an opportunity for constructive change. The economy and the budget will drive strategy. If we don't agree to a unifying vision that underpins these decisions, we will be left with an irrelevant, hollow force that is incapable of protecting U.S. vital national security interests. Seizing the opportunity requires strong leadership by the Secretary of Defense with the full support of the Joint Chiefs of Staff - otherwise inertia will reign and service tribal self-interest will prevail over strategy.

Prudent reductions in defense spending must be anchored to an underlying set of principles that informs strategy and focuses scarce resources. These include adjusting U.S. strategy to account for the resource constraints, maintaining effective deterrence, continuing to flatten the defense enterprise, and reforming DOD business processes.

The single biggest threat to national security is the national debt. American taxpayers are going to pay an estimated \$600 billion in interest on the national debt in 2012. That's one year's worth of defense budget.

Admiral Mike Mullen, Former Chairman, Joint Chiefs of Staff, August 27, 2010

The quote above from Admiral Mullen is particularly profound, because it was spoken by the nation's senior flag officer who as recently as 2008, publicly called for the U.S. to spend at least 4% of gross domestic product on defense. On January 5, 2012, President Barak Obama announced the release of new defense guidance titled, Sustaining U.S. Global Leadership: Priorities for 21st Century Defense. The document is a long overdue first step toward realigning U.S. defense posture to current realities and sizing the force to a set of capabilities the nation can afford. This paper attempts to articulate some of the pressures that led to the new guidance, and to propose ideas for addressing many underlying problems with current U.S. national defense posture. In spite of their many positive attributes, democracies often seem incapable of making deep change except when they are standing on a burning platform and have no other choice.

In spite of all of the rhetoric about cuts, the chart below demonstrates that the DOD budget grows through 2017, with the exception of a minor dip in FY13.

Defense Budget Over Time

\$B	FY01	 FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17
Base	297	528	528	531	525	534	546	556	567
осо	13	163	159	115	88				
Total	310	691	687	646	614	534	546	556	567

Source: DOD Fact Sheet on the Defense Budget **Note:** Numbers may not add due to rounding

This is because the President's FY2013 Defense Budget does not reflect the sequestration cuts mandated by the 2011 Budget Control Act that were triggered when the bicameral super committee failed to reach a compromise. The \$400B of initial reductions mandated by this law actually curtailed planned growth in the defense budget – nothing was significantly cut. The additional sequestration cuts of \$600B are supposed to take place over ten years, and it remains unseen how Congress will react to their absence in the 2013 budget. While drastic reductions are significantly more difficult to manage, the failure to account for the cuts in the President's Budget may lead to a showdown with Congress after the 2012 election. If Congress chooses not to fight, it effectively removes the motivation for the Department of Defense (DOD) to embrace reform.

As Samuel Huntington pointed out in 1996, "In the twentieth century the relations among civilizations have thus moved from a phase dominated by the unidirectional impact of one [western] civilization on all others to one of intense, sustained, and multidirectional interactions among civilizations." If anything, this observation is truer today than when he wrote *The Clash of Civilizations and the Remaking of World Order*.

From a strategic perspective, continued pursuit of unipolar global dominance in this context leads to national bankruptcy and the inability of the United States to protect its vital national interests. The future security of the United States is already threatened by a weak economy, excessive debt, and a military enterprise paralyzed by diffuse accountability and redundant overhead costs.

The Department of Defense and Congress must act quickly to prepare for budget cuts that are likely to exceed \$1 trillion over ten years. Seizing this opportunity will require strong leadership by the Secretary of Defense with the full support of the Joint Chiefs of Staff - otherwise inertia will reign and service tribal self-interest will prevail over strategy. Leveraged correctly, the current fiscal crisis presents a unique opportunity to challenge strategic assumptions, focus on essential priorities, and further evolve joint culture.

Strategy is about making choices and balancing risk – no nation will ever have the resources to do everything it wishes. Todd Harrison addressed this point in an article about the FY2012 Defense Budget, "Strategy is central to determining the proper level and composition of defense spending because a strategy the nation cannot afford is not a good strategy, and a budget disconnected from strategy wastes money. A good strategy recognizes the real budgetary constraints the nation faces and makes the hard choices these constraints require. In a period of fiscal austerity, that means accepting some risks and divesting of lower priority programs and capabilities."²

It's the economy stupid...

Economic reform is one of the most serious national security issues facing the U.S. today. The hard truth is that there can be no effective defense strategy without a tax base to

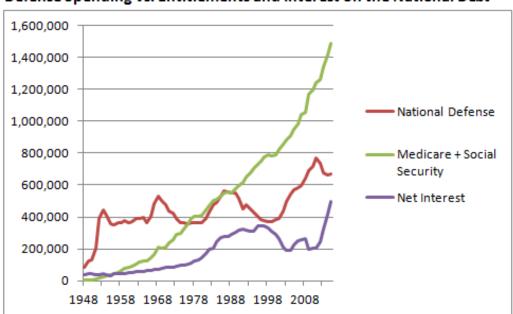
support it. Corporate tax reform is one essential element required to reinvigorate the U.S. economy and industrial capacity. At a minimum policy makers could lower the overall corporate tax rate, eliminate loopholes, and reduce or eliminate the double taxation of overseas profits. Under current tax code, overseas profits earned by U.S. companies are taxed at 35%. The tax applies regardless of whether the funds were already taxed in the country they were earned, but only when the money is returned to the United States. Sadly, this system "generates minimal tax revenue while deterring American corporations from using their foreign profits to build facilities in the United States." Without corporate tax reform, industry will continue to invest in other countries to the detriment of the U.S. economy and industrial capacity.

Entitlement reform and defense cuts are two other areas that policy makers must address is order to return the nation to a sound economic footing. Major U.S. budgetary events in 2012 demonstrate that defense spending may be easier for policy makers to address than other budget categories, but even this appears difficult to enforce.

According to the Congressional Budget Office, publicly held debt will increase to 61 percent of GDP by the end of 2021⁴. This debt is driven by growth in mandatory spending programs, such as Medicare, Social Security, and other major health care programs. Combined, these programs accounted for approximately 10.3 percent of GDP in 2011, and will grow to 12.3% of GDP by 2021. Medicare, Medicaid, and Social Security will account for over 83% of the federal budget by 2021. Elected leaders must find the courage to tackle entitlement and debt reform along with other areas of domestic spending. Otherwise there are not enough savings in all of DOD to balance the federal budget. So what are the options for achieving

budget reductions while maintaining a viable national security strategy and continuing to protect vital U.S. interests?

Reducing defense spending is a serious challenge. In testimony before the House Armed Services Committee, Stephen Daggett of the Congressional Research Service explained that "By 2009, the DOD base budget had grown by 48% above inflation since it reached its lowest post-Cold War level in FY1998." This is not only because of the wars in Afghanistan and Iraq. In his testimony, Mr. Daggett went on to explain that the "budget seems tight because the cost of almost everything the Defense Department does – from meeting recruitment goals, to operating new weapons, to acquiring advanced technology – has been accelerating at a pace that growing budgets cannot keep up with." Growing the defense budget, while clearly not an option, would not net much return on investment under these conditions.



Defense Spending vs. Entitlements and Interest on the National Debt

Source: OMB Budget Data in Constant 2011 Dollars

The chart above depicts a 64-year average for U.S. defense spending, Medicare and Social Security, and interest on the national debt in constant FY2011 dollars. Even with the

most recent Budget Control Act cuts, at \$646B the DOD budget remains well above the historical average of about \$460B since the Korean War. Given the magnitude of the current fiscal crisis, DOD can expect future defense budgets closer to the \$400B level even after policy makers are forced to undertake entitlement and debt reform.

Across the board cuts would likely leave the U.S. with unbalanced, irrelevant forces. Prudence requires working closely with the congressional defense committees to achieve alignment on the department's budget priorities and to build down to a force and set of integrated capabilities the nation can afford. Given the constitutional oversight and resourcing roles of Congress, no meaningful reform will occur without full committee support throughout the process. The threat of scarcity should create the incentive to focus U.S. national security policy while addressing underlying cost drivers and enacting long overdue reform of DOD business practices.

According to the Stockholm International Peace Research Institute, the U.S. increased its defense spending by over 75% since 2001 and now accounts for 43% of the global defense spending. How much of the burden for global security should one nation reasonably bear? Some believe that the U.S., like Great Britain and Rome before it, has entered into an age of decline. In an article discussing America's need to manage its changing role in the world affairs, Gideon Rachman posits that "Those who refuse to entertain any discussion of decline actually risk accelerating the process. A realistic acknowledgement that America's position in the world is under threat should be a spur to determined action on everything from educational reform to the budget deficit."

Given the overall state of the world economy, the degree of U.S. decline may be open to interpretation. However, strategic overreach and economic malaise clearly will not lead to reascendance. Former Under Secretary of Defense for Policy, Ambassador Eric Edelman, believes that "Ideas about American decline can cut two ways. They can predispose policymakers to pursue policies that actually accelerate decline or they can spark leaders to pursue courses of action that renew American economic vitality in order to reverse decline." ¹⁰

The topics below are offered as a broad framework for considering defense reform.

They are not all inclusive, but are intended to stimulate discussion. Some conform to Secretary of Defense Leon Panetta's strategic guidance, while others propose specific actions to address strategic or business reform within the Department of Defense.

Do less with less.

Since the end of the Cold War, the U.S. has struggled to define a security strategy that protects its vital interests, deters terrorism, provides global leadership, and preserves scarce resources in an increasingly fragmented and unpredictable world. Our current level of engagement is exorbitantly expensive and motivated by what Patrick Cronin describes as "two historic impulses" driving the U.S. to play the roles of the "global enforcer" and the "global savior." These impulses compel U.S. commitment to "protracted conflicts that promise to be expensive without providing commensurate security gains."

Significant defense cuts are realistic only if policy makers accept major shifts in global posture and constraints on future military interventions. Such reductions would require adjustment of defense strategy to account for these resource limitations, application of critical

thinking to reevaluate actual vital interests, and taking prudent action to mitigate risk when our predictions are inevitably wrong.

The U.S. must stop subsidizing allied nations who are unwilling to invest in their own security, particularly as the focus of world affairs shifts from Europe to Asia. As the new DOD Strategic Guidance articulates, "Most European countries are now producers of security rather than consumers of it. Combined with the force reduction in Iraq and Afghanistan, this has created a strategic opportunity to rebalance the U.S. military investment in Europe, moving from a focus on current conflicts toward a focus on future capabilities." It is also time to recognize that many of our preferred defense solutions are exceedingly resource and manpower intensive, and often incongruent with long term U.S. interests.

The 9/11 al Qaida attacks created a national obsession with preventing new attacks at all costs. This narrow focus led us to expend vast resources in Afghanistan and Iraq, to push Pakistan into counterproductive military operations in the Federally Administered Tribal Areas, and to engage wherever terrorist cells migrate. The results of these efforts have in many ways undermined U.S. prestige, alienated much of the world's Muslim population, increased the regional influence of Iran, and exhausted our allies.

Ironically, our visible presence in many Muslim regions may be prolonging the conflict by appearing to validate the recruiting narratives of radical groups. Although the long term outcomes in Iraq and Afghanistan are not yet clear, the long term commitments there have resulted in over 6,300 dead and 47,500 wounded U.S. troops and expenditures in excess of \$1.2 trillion.¹³ If Samuel P. Huntington's *Clash of Civilizations* model remains valid, "Islamic culture explains in large part the failure of democracy to emerge in much of the Muslim world.¹⁴"

Continuing to promote western democracy in Islamic countries will not only prove ineffective, it will be perceived by many as a deliberate threat to Muslim civilization.

As David Kilcullen aptly articulates in the *Accidental Guerilla*, "Because the enemy's strategy is to exhaust and bankrupt the West, sharply limiting expenditure and adopting a focus on small, local, low-cost programs is likely to be much more effective." During the Cold War, the West collaborated with many of our current enemies to effectively break the Soviet Union's economy. Regardless of whether al Qaida's strategy is working or the U.S. is just too arrogant to believe our own economy is vulnerable, disaster is a potential outcome.

Another salient point Kilcullen makes is that the U.S. is essentially fighting more enemies than we need to because we have inserted ourselves into multiple regional and local conflicts. The factions would otherwise be fighting each other, but instead cooperate against our foreign intervention. Kilcullen and other observers also note that counterterrorism is a strategically defensive endeavor. While vital, it is not an end to itself. Overemphasis on counterterrorism requires a trade-off of offensive activities that are more likely to achieve national objectives through other means.

Meanwhile, the Chinese are expanding their reach from Africa to Southeast Asia in order to expand their access to hydrocarbons and other natural resources. In *Monsoon: the Indian Ocean and the Future of American Power*, Robert Kaplan describes the manner in which the dominance of counterterrorism in U.S. policy is limiting strategic focus in these regions. "U.S. Special Operations Command was preoccupied mainly with the Arab-Persian western half of the Indian Ocean and much less with the eastern half. This, my acquaintances said, was an

example of how America's obsession with al-Qaida has warped its larger strategic vision, which should be dominated by the whole Indian Ocean, from Africa to the Pacific." ¹⁷

The tone of U.S. foreign policy since the latter half of the 20th century has been exceedingly arrogant and demanding. This significantly undermines our credibility when the nation is not prepared to back-up belligerent talk with decisive military action. For example, "The U.S. saw the costs of speaking loudly and carrying a small stick in the Russian invasion of Georgia in 2008." At the same time, the overly assertive nature of U.S. foreign policy often compels regional powers to align as a balance to our influence. Softening our tone and acting decisively to protect our national interests are essential elements to restoring U.S. credibility and removing incentives to counter our influence.

Before we succumb to the assumption that we are on a collision course with China, it may be prudent to consider the words of Andrew Bacevich in the *End of American*Exceptionalism, "War remains today what it has always been—elusive, untamed, costly, difficult to control, fraught with surprise, and sure to give rise to unintended consequences." While there is little doubt that the U.S. is competing with China for access to resources and influence in the Indian Ocean and Western Pacific, it is far from certain that this leads to war. Robert Kaplan addresses this point in *Monsoon*:

Therefore, it is not inevitable that two great powers that harbor no territorial disputes, that both require imported energy in large amounts, that inhabit opposite sides of the globe, and whose philosophical systems of governance, while wide apart, are still not as distant as were those between the U.S. and the Soviet Union, will become adversaries... Thus, leveraging

allies must always be part of a wider military strategy that seeks to draw in China as part of an Asia-centric alliance system, in which militaries cooperate on a multitude of issues.²⁰

Preparing for war with China is wise; stumbling into it because of intellectual bankruptcy and poor strategy is beyond folly. The U.S. must make wise choices during this period, while adjusting to the reality of our own resource constraints.

Maintain credible deterrence and decisive response.

It is important to preface this section by highlighting that the U.S. seldom chooses when and where we fight the next war. In the case of Iraq, many would argue that we chose poorly. With this in mind, the key to deterrence is to maintain an essential mix of capabilities and experienced forces that make competitors think carefully about opposing U.S. interests. This should supplement and reinforce U.S. diplomatic, informational, and economic policy.

In the 2012 Defense Budget Priorities and Choices document, Secretary of Defense Leon Panetta highlights several choices DOD is making to adjust for current budget realities.²¹ These include reducing the pace of ship building and divesting numerous legacy or niche Air Force cargo systems like the C-5A, the oldest C130s, and the C-27. This is a critical step toward establishing priorities, but doesn't go far enough given the magnitude of the fiscal crisis.

During the latter half of the 20th century, the U.S. relied on a Nuclear Triad of bombers, intercontinental ballistic missiles, and submarines while deliberately reducing the size of its ground forces. A similar approach has merit today given the explosion in personnel and acquisition costs, but caution is warranted. In this era of hybrid war and transnational threats, nuclear deterrence alone cannot guarantee security. It must be complemented with viable

conventional and special operations forces, sustained force projection capabilities, and smart forward presence.

Some mix of reliable nuclear ICBMs, bombers, and submarines is required. At the same time, we need to adjust our nuclear capabilities and other strategic forces to meet our actual security needs. During the negotiations for the START II Treaty with Russia in 2010, the Pentagon publicly acknowledged for the first time that the United States has 5,113 nuclear warheads. Following the announcement, two Air War College planners, Gary Schaub Jr. and James Forsyth Jr. opined that "311 warheads would provide the equivalent of 1,900 megatons of explosive power, or nine-and-a-half times the amount that Secretary of Defense Robert McNamara argued in 1965 could incapacitate the Soviet Union." According to Lawrence Korb and Alexander Rothman at the Center for American Progress, reducing our stockpile to 311 warheads could save the United States up to \$110 billion over ten years.²³

Additional savings are possible by retiring the venerable B-52 bomber and other obsolete systems immediately. In addition to funding the next generation strategic bomber, the U.S. must continue pursuing asymmetric advantages through programs like prompt global strike, offensive cyber capabilities, and unmanned aerial systems. These will not replace nuclear deterrence, but will significantly enhance its overall effect. Reconfiguring modern cargo aircraft to drop conventional ordnance may also be an option if that capability is still deemed essential.

There is a tendency by technophiles and air power advocates to discount the continued relevance of ground forces. Such thinking in many ways led to the intellectual bankruptcy of U.S. strategy in Afghanistan and Iraq. Future calls for large scale deployments should be met

with healthy skepticism and a robust discussion about post conflict stabilization and transition.

At the same time, ground formations must remain a key element of the joint force so long as our adversaries seek to avoid U.S. advantages in firepower and strategic reach.

Nathan Freier discusses this point in a CSIS report on ground forces, "In the end, the very real prospect of numerous short-notice contingencies occurring in any of several far-flung locations, possibly simultaneously, and potentially requiring thousands of ground forces in response, indicates that the capabilities to project forces over great distances will be broadly relevant and important going forward."²⁴ The CSIS report analyzed 14 likely future contingency types. Although Freier and his co-authors believe the likelihood of large scale conventional conflicts are unlikely, they also believe there will be a greater demand for both "forcible entry capabilities" and "armored maneuver capabilities."²⁵

Force projection and selective forward presence are essential capabilities in an era likely to see more hybrid conflicts. Even with the stress of Iraq and Afghanistan, no other country in the world is capable of fielding forces with the ability to defeat the United States in a land campaign. David Kilcullen explains how U.S. overmatch drives potential enemies to favor irregular options. "Any rational adversary is likely to fight the United States using unconventional means. These may include propaganda and subversion, terrorist attacks, guerrilla warfare, weapons of mass destruction, or attempts to drag conventional forces into protracted engagements for little strategic gain." 26

Former Secretary of Defense Robert Gates also emphasized the continued relevance of ground forces in a 2008 speech at the Heritage Foundation.

The record of the past quarter century is clear: the Soviets in Afghanistan, the Israelis in Lebanon, the United States in Somalia, Afghanistan, and Iraq. Smaller irregular forces—insurgents, guerillas, terrorists—will find ways, as they always have, to frustrate and neutralize the advantages of larger, regular militaries. And even nation-states will try to exploit our perceived vulnerabilities in an asymmetric way, rather than play to our inherent strengths. Overall, the kinds of capabilities we will most likely need in the years ahead will often resemble the kinds of capabilities we need today.²⁷

While the U.S. needs to reduce the number of large troop deployments and align others to better protect our interests, it is essential that we not run for the exits. Large troop commitments in Europe and Korea should be closely scrutinized, but allies and competitors will interpret complete disengagement as abandonment. The January 2012 DOD decision to remove two Army brigades from Germany is timely, but was wisely hedged by leaving a brigade combat team as part of the NATO response force. Combined with robust security cooperation, rotational deployments, and other mil-to mil activities, the measure will assure allies and deter competitors while making forward presence more affordable. This will also enable the U.S. to focus on vital national interests, while reducing unnecessary forward basing that effectively subsidizes the security of other nations.

Associated risk with active component force reductions should be mitigated by sustained investment in the reserve components (RC) and their continued employment as an operational force. Congress laid the groundwork for this in the 2012 National Defense Authorization Act, which modified 10 USC § 12304 to allow RC mobilization at times other than war or national emergency for up to 365 days. This increased reliance should only be sustained

if DOD further refines RC employment policy and continues mobilization reform. It would be neither wise, nor cost effective to lean too heavily on the reserve components simply because national leaders fail to make strategic choices.

Additional caution is warranted concerning reserve component force structure.

Conventional deterrence will prove meaningless if the services under invest in the Guard and Reserves to meet short term budget pressures. In an interview with Defense News the Army's Director of Force Management, Major General Anthony Lerardi, stated that cuts to the National Guard and Army Reserve are not currently being considered in the current Total Army Analysis.

"I would say that generally speaking, as the active component comes down our reliance on the reserve component will be equal if not more important." 28

Flatter is better.

One assumption inherent to many reform discussions is that DOD's basic structure is optimal, or at least acceptable. The bloat starts at the top, and leadership should start there too. At its creation in 1948, the Office of Secretary of Defense consisted of the secretary, the deputy secretary, three presidential appointees and a staff of about 50 people. Today there are 26 presidential appointees and a staff of approximately 3,000 people. While large scale civilian personnel reductions are politically undesirable, this should not prevent cutting OSD by a quarter or half through attrition, and further consolidating redundant headquarters. These cuts would provide the added benefit of streamlining the bureaucracy.

While the Air Force should arguably remain a separate service, does it need to remain a separate department? Significant personnel savings are possible if DOD consolidates into two service departments: the Department of the Army and the Air Force and the Department of the

Navy and Marine Corps. Combining the Army and Air Force at the secretariat level could create significant cost savings. According to the 2011 Air Force Almanac, there are 2,087 military and 1,655 civilian positions at Headquarters, U.S. Air Force. ³⁰ There are also 18,032 military and 8,381 civilians personnel assigned to Air Force Field Operating Agencies. ³¹

Using a conservative estimate, this action and the previous OSD example could save in excess \$3.6B per year in 2010 dollars.³² This only reflects average wages and compensation savings and does not account for reduced operating costs or the higher benefit costs of military personnel in relation to their civilian counterparts.

If one assumes similar numbers in the Army and a reduction of 40% from combining the two, this could result in a savings of up to 16,000 military positions and 8,300 civilian positions. Still more savings are possible if the service departments consolidate personnel, financial, communications, and logistics directorates. Maintaining separate operations directorates for each service is most likely required, but should be closely analyzed.

DOD should change the Unified Command Plan to reintegrate USEUCOM and USAFRICOM. Given the strategic importance of Africa, elevating it to the level of a combatant command was desirable, but does not seem prudent in this period of increasing resource constraints. The grade of each service component command should also be reduced to three-star or below as the Army has already done in Europe. Even greater savings are possible if four-star positions are limited to the Joint Chiefs, the Combatant Commanders, and sub-unified or combined commanders in active combat theaters.

One major caveat to these reductions worth considering applies to cyber. Given the growing significance of cyber warfare, USCYBERCOM should remain a four-star command in order to position the organization for success in future budget deliberations.

Address the cost drivers.

Resource scarcity should clarify the need to consolidate redundant service functions.

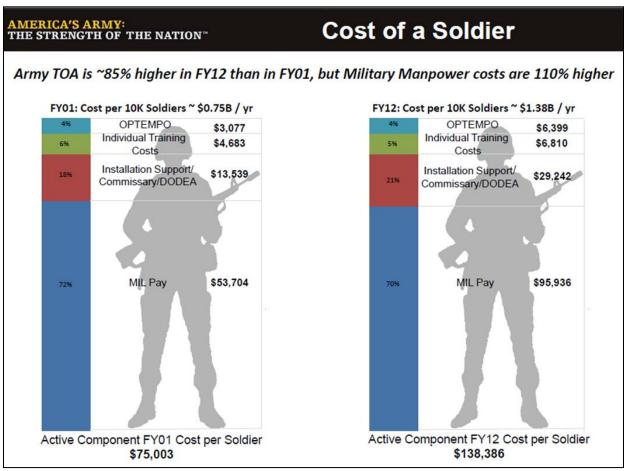
The private sector was already forced to embrace this reality to remain competitive, and the drivers are no less compelling within DOD. According to a January 2010 Defense Business

Board report, "overhead costs continue to grow and presently constitute roughly 42% of Total Obligation Authority." Cutting 25-30% of this overhead will result in substantial savings. At current funding levels, this could free almost \$66B per year for other priorities.

Unfortunately, the focus on short term budget cycles often prevents substantial savings. The department may first have to invest in some areas before significant savings are possible. Some major examples of where industry has undertaken these endeavors are in the domains of information technology, human resources, finance, and acquisition. The department could garner additional savings by eliminating post exchanges and privatizing the commissary system except where there is limited infrastructure.

Given past consolidation failures, the department may be wise to build the new support capabilities first, and then transferring the armed forces to them one at a time. Each service will have a laundry list of reasons why their requirements are unique. Given that these support functions are essentially commodities, policy makers should accept no excuses. Congress can support the process by granting DOD broad temporary authority to consolidate activities, and then working with the department to update applicable laws over a period of years.

Because personnel drive so much of its cost growth, DOD is already reducing the size of the Army and Marine Corps to pre-war levels. While fiscally effective, it will prove disastrous if we continue the post Cold War frequency of foreign intervention. Sustaining the all volunteer force is widely viewed as a national security imperative, but DOD must come to grips with growing human capital costs for this model to remain viable.



Source: Army G8 Briefing, Women in Defense, dated October 27, 2011

The slide above from a U.S. Army G8 briefing illustrates how personnel costs have grown exponentially over the last ten years. The bottom line is that the cost of maintaining ten thousand soldiers has nearly doubled since 2001. DOD is in the process of developing methodologies to accurately report the personnel costs of reserve component soldiers in a

similar fashion. Consensus on accurately weighting RC personnel costs is critical to informing future deliberations on the appropriate active-reserve force structure balance.

While significantly improved in recent years, DOD RC management processes still constrain decision makers and fail to leverage unique Guard and Reserve capabilities. One narrative that emerged during the early failures in Iraq and Afghanistan is that the military was doing its part, but that the rest of the government never showed up. In an analysis of future ground force capabilities, Nathan Freier states that "Given the likely decline of resources in other U.S. government agencies, deployed ground forces will still perform many nonmilitary stability operations tasks."³⁴

Given this reality, the services must track the civilian skills of reserve component members, and establish mechanisms to tap that expertise during post conflict stability operations. If the vaunted Civilian Response Corps ever fully materializes, it is unlikely to flourish as agencies struggle to meet their own budget pressures.

The services should evaluate policies to prudently reduce the average age of the force and the number of members with families. In 1993, then Commandant of the Marine Corps General Carl E. Mundy received considerable public scrutiny for an order he gave that would have "reduced the share of married enlistees."

The Secretary of Defense correctly overturned the policy, but it is worth revisiting General Mundy's rationale for the order. "Mundy said that 40 percent of Marines on their first enlistment are married and are bearing the brunt of a fierce schedule of overseas deployments that would put an enormous strain on more mature married personnel, much less on an 18- or 19-year-old Marine with a teenage spouse." Almost every officer and NCO who has served

with young troops has experienced these challenges, and Mundy's observations took place before the recent decade of conflict.

Because we also strive to maintain a high quality of life for the all volunteer force and our families, this entails higher infrastructure and support costs than would otherwise be the case. As the personnel costs slide above depicts, the cost of Army installation support more than doubled from 2001 to 2012. Given that the Secretary of Defense has placed military compensation and retirement on the table for future forces, it is worth revisiting assumptions about the percentage of each service that should serve a full career in the active components along with the average age of those forces.

Even though the nation has not completed its mission in Afghanistan, the Army and the Marine Corps appear to be the principle force structure bill payers for this round of defense cuts. There is risk associated with these decisions, particularly if we continue to engage in numerous small scale contingencies. Cutting and reorganizing ground forces makes sense, gutting them is problematic given that irregular and hybrid war are not likely to go away. Policy makers, not generals, decide when the nation goes to war. Therefore balance is required to ensure the remaining forces remain relevant and lethal.

Ground truth on force modernization.

Before diving into requirements and acquisition reform, it is important to consider the current equipping status of the armed forces. With all of the dismal reporting, one might conclude the services are already in the midst of an equipping crisis. Interestingly, an October 2011 report from the Stimson Center authored by Russell Rumbaugh argues that the Service Departments actually achieved considerable modernization over the last ten years.

Since FY01, we spent roughly \$1 trillion on defense procurement, and the military services used that funding, including that provided in the supplemental war funding, to modernize their forces... At the start of the second decade of the 21st century, U.S. military capabilities and technology are the most advanced in the world. Although much of the US military strength is rooted in the professionalism and dedication of the people in the services, they are also outfitted with the best equipment in existence. The Army has higher quality and more modern tanks, fighting vehicles, supply trucks, small arms, helicopters, and support equipment than it had at the start of the decade. The Air Force has better fighter, airlift, and unmanned aircraft. And the Navy and Marines have better ships, aircraft, and support equipment.³⁷

Rumbaugh's report makes numerous other valid points, but one in particular deserves consideration. Many pundits lament the "fighter bathtub" that compels the Air Force to make do with fewer aircraft as the current fleet of aircraft ages out. Yet, this situation is the direct result of procurement decisions to develop expensive fifth generation fighters.

...the Air Force spent \$347B on procurement in the last decade [approximately 40% of procurement funds in the DOD Base Budget during those years]. Its procurement budget increased in constant dollars for eight straight years and in FY10 was 54 percent higher than it was in FY01, in constant dollars... The Air Force ended up with few fighters not because of a lack of procurement funding, but due to a choice to procure an expensive, high-end fighter.³⁸

In contrast, the Navy bought more than 369 upgraded F-18 E/F aircraft during this period.³⁹ Perhaps it is worth revisiting the cost plagued Joint Strike Fighter (JSF) program, and

whether the Air Force should purchase upgraded F-15 and F-16 systems. New builds of these legacy platforms with updated radar and fire control systems are certainly sufficient for the U.S. air sovereignty mission and supporting ground forces in future conflicts.

If it is ever fielded, the JSF with its advance AESA radar will be one of the most capable fighters in the world. It may be possible to more fully leverage the international partners participating in the JSF program to address budget concerns, but without making compromises somewhere it is difficult to imagine how the Air Force will fund all of its priorities. The U.S. cannot afford to invest 39% of the overall defense procurement budget on a single capability when we expect to need more long range strike and persistent ground support aircraft for the foreseeable future. The Air Force is not alone in its desire for high end capabilities, but this example highlights how the failure to make tradeoffs is already limiting options.

Manage the industrial base.

The Department of Defense needs to begin actively managing the industrial base. The defense industry is not a free market, and "more competition" does not automatically guarantee cost savings. Barry Watts addressed this topic in testimony before the House Armed Services Committee in 2011. "In reality, the defense industrial base is highly regulated by both DOD and Congress to achieve maximum risk avoidance. Structurally, it is unique in having a monopsony buyer – the U.S. government (which is also the regulator) – and a few oligopoly suppliers in each sector due to the consolidations of the 1990s." This obsession with risk avoidance is also a major driver for cost growth.

The government's choice not to manage the industrial base has already limited the number of competitors in the market because industry does not retain unused capacity that is

not creating shareholder value. According to Fred Downey, "In the 20 years since the Cold War, nearly 150 significant defense companies have consolidated to six. From the mid-1980s to 2007, a number of big companies left the defense market altogether, while nearly none entered it." Smaller companies with less access to capital find it difficult to navigate the cumbersome procurement process, further limiting the number of players competing in the defense market. Doing business with DOD also involves significant risk given the uncertain nature of defense budgets and the burden of the Federal Acquisition Regulation and federal auditing requirements.

While competition for major systems is desirable, it is not a cure all. Jacques Gansler points out that while there is often robust competition for initial contract awards, "product development, which may last over ten years, and then long-term production and product support – is normally conducted in a sole-source environment, where the contractor is essentially in a monopoly position and the government is dependent upon that producer for military equipment that it badly wants and for which it will usually pay whatever is asked." 43

Continued failure to manage the industrial base will result in more companies leaving the defense business as they decide that competing for diminishing defense dollars is not worth the risk. The current DOD budget contraction is already driving industry to consolidate and divest unprofitable business segments. A recent example is Boeing's January 2012 announcement that the company is closing its defense factory in Wichita, Kansas and eliminating 2,160 jobs.

Uncertainty about the DOD budget also drives other detrimental behaviors in the defense sector such as companies reducing their own research, development, and engineering

(RD&E) investments. DOD and Congress are increasingly pushing the acquisition community to favor the lowest bids when they are technically acceptable. Viewed in combination with other factors like recent Defense Contract Audit Agency efforts to minimize profits on defense contracts, why would industry gamble scarce internal RD&E resources if the investments are not likely to pay off?

These same factors are likely to further reduce competition as companies carefully consider whether the cost of bidding for contracts is worth the investment. A prominent example of this behavior is Northrop Grumman's 2010 decision not to compete in the latest round of the Air Force tanker competition. Why would the company invest millions of dollars to bid on a contract structured to favor lowest cost to procure instead of best value when that effectively limits their ability to compete? The Air Force was not even going to consider the merits of lower life cycle costs, yet seemed surprised when Northrop Grumman walked away. Like it or not, there is only one domestic company now in a position to supply tanker aircraft to DOD.

Unfortunately this is true for many large defense systems that require significant integration. Since the remaining companies are increasingly in monopoly positions to the government, it is difficult to imagine how meaningful defense reform can take place without more direct management of the industrial base. The risk is that the pendulum will swing too far, and that the government will over regulate to the point where more companies choose to exit the defense sector.

Requirements and procurement reform.

DOD needs to fix the requirements process and restore sanity to defense acquisition.

There is not enough accountability, the process moves too slowly, and the lack of collaboration between acquisition officials, the requirements community, and industry guarantees continued performance issues and problems with cost growth. This disjointed process locks in obsolescence, ensures DOD pays a premium for old technology, and reinforces counterproductive government and industry behavior based on litigation fears.

Ironically once a major system is acquired, the government provides virtually no incentive for industry to further reduce costs or increase efficiency except during the negotiation of follow-on contracts. The government should structure contracts to reward industry when it successfully reduces incremental costs during a program, share the savings, and not penalize incumbent companies during subsequent contract awards. Given the intense budget pressures and the pace at which technology is advancing outside of DOD, the nation cannot afford to keep making these mistakes. Nor can DOD allow the services to continue chasing technology while underfunding major programs – exponentially increasing risk and wasting scarce resources. The services have a poor track record of controlling requirements and making cost trade-offs. The problem is further compounded by Congress spreading limited resources across too many competing priorities because DOD rarely speaks with one voice.

Reform must start with accountability. With all of its layers, the Joint Requirements

Oversight Council and its supporting organizations still function largely through consensus. The

Vice Chairman of the Joint Chiefs of Staff should be designated in law as the chief requirements

officer for the Department of Defense and given broad latitude to approve joint requirements

and to oversee service requirements generation. Likewise, each service vice chief should be designated in law as that service's chief requirements officer. Without instituting direct accountability at the top to the Secretary of Defense and Congress, the requirements process will remain broken and continue to undermine acquisition reform.

Not surprisingly, defense industry leaders find the acquisition process dysfunctional.

According to a 2009 Business Executives for National Security (BENS) Report, "The acquisition process is actually not a unified process: It better resembles a collection of band-aids layered over each other, each designed in its time to solve some specific problem, none undertaken in consideration of its eventual impact on the acquisition function as a whole." Any serious attempt at reform must consider the impact of specific changes to the overall system.

The current process holds requirements as sacrosanct and imposes limits on the degree of collaboration that can take place prior to issuing a request for proposal. To address the issues of requirements overreach and chronic underestimation of costs, the BENS report recommends the system "become an iterative process involving war fighters who understand the nature of combat, engineers who understand the limits of technology, and financial experts who can accurately estimate costs and assess consequences for future budget scenarios.⁴⁵

This cross-functional collaboration is necessary to restore a rational process for assessing technological maturity in relation to war fighter needs. The current system fails to provide decision makers with the essential information required to make trade-offs. Human nature is to always seek the best – especially when someone else is paying the bill. "Achieving the last few percent of performance improvement in a weapon system tends to raise costs by

30 to 50 percent."⁴⁶ Someone has to be empowered to set limits on requirements, or acquisition reform is impossible.

The services also need to ruthlessly stop driving military unique solutions and accept "good enough" technologies where it makes sense. "As the computer world has demonstrated – with higher and higher performance, at lower and lower costs, with each new generation of systems; and with new systems coming out on 18 month cycles – it is clearly possible, using product and process technology evolution, to simultaneously realize the dual objectives, of lower cost and higher performance. However, this requires changing the DOD 'requirements' process, to include cost and schedule; and to fully utilize a 'block upgrade' process – beginning with proven technology (for 'Block I'), in order to get it out into the field rapidly."⁴⁷

The complexity of the acquisition process combines with rent seeking behaviors by major defense companies, political intervention, and narrowly focused service specifications that limit the ability of program managers to effectively control their programs. These interest clusters compete against each other with the collaboration of current and former defense officials to influence the outcomes of major acquisition decisions. It is impossible to calculate how much this all costs the taxpayer, but it is substantial. The 1986 President's Blue Ribbon Commission on Defense Management spoke about this corrosive influence.

The program manager finds that, far from being the manager of the program, he is merely one of the participants who can influence it. An army of advocates for special interests descends on the program to ensure that it complies with various standards for military specifications, reliability, maintainability, operability, small and minority business utilization, and competition, to name a few. Each of these advocates can

demand that the program manager takes or refrain from taking some action, but none of them has any responsibility for the ultimate cost, schedule, or performance of the program.⁴⁸

Some additional acquisition changes could create significant savings and improve outcomes. In a report for the Center for Strategic and Budgetary Analysis, Barry D. Watts and Todd Harrison argue that "facilitating competition below the prime contractor level, shifting to time-certain acquisition, and thinking strategically about the long-term value of the Services' 'business' preferences seem like promising places to start in seeking greater efficiency within the existing structure of the U.S. defense industrial base."

In an era where only a limited number of prime contractors compete for major defense programs, competition below the prime level may be one of the few remaining ways to leverage market forces to drive down costs. For example, the service departments could leverage working capital funds during depot rebuilds to increase the adoption of technical insertions and block upgrades. This will permit them to work with industry to implement technology and performance increases over time without significantly increasing risk. This approach has the potential to affordably increase fuel efficiency, reduce maintenance costs, and incrementally increase operational capability.

Another major benefit of competing at the component and subcomponent level, particularly on mature systems, is that the government can avoid paying premiums to prime contractors for obsolete technology. This does not mean the government should fund development of competing solutions like the second Joint Strike Fighter engine.

DOD cannot afford to continue wasting billions of dollars chasing sunk costs, and effectively have nothing to show for the investments. Some prominent examples of canceled programs include the Future Combat System, Expeditionary Fighting Vehicle, DDG-1000, Crusader, Comanche, and the VH-71 presidential helicopter – a total of over \$47B lost to cancelled programs since the late 1990s. Arguably, most of these programs should have been cancelled much earlier. As of 2010, the Center for Strategic and Budgetary Analysis indicates that 101 major defense acquisition programs were experiencing 22% cost growth. In addition to cost growth, many programs fail because their development occurs over so many years that the original requirements or technical approach are no longer valid.

The current focus on low cost, technically acceptable contracting practices will most likely lead to expensive operating costs over the life of many systems. The services should be heavily weighting life cycle costs in most acquisition decisions. Perhaps establishing clearer linkages between acquisition and sustainment costs in each service's budget would increase the incentive to make better business decisions. At the same time, Congress should consider expanding the use of multi-year contracts. This would balance risk while incentivizing industry to cut costs. While this might require Congress to give up some control in the annual budgeting process, it does not imply a reduction in authority or oversight.

Action is also required to reduce the administrative and auditing burden that has not reduced procurement costs. "In considering the conduct and performance of the defense industry it is critically important that one recognize the great degree of regulation present, in spite of the fact that defense is not normally listed as a regulated industry. This regulation is unique in kind, in that the regulator is also the buyer." ⁵²

In response to substantial Congressional scrutiny, the Defense Contract Audit Agency (DCAA) is aggressively exerting its influence across the acquisition enterprise. At the same time, it is attempting to reduce corporate profits as part of the overall DOD cost control effort.

Combined with the already disjointed system, this activism is mostly counterproductive.

Although efficient contract oversight is a desirable component of responsible government, it is impossible to audit excellence into a major defense program.

DOD should rigorously account for the time and opportunity costs associated with program delays, auditing burden, and complying with specific oversight requirements. Without establishing a baseline and instituting processes to track this information, DOD officials and Congress will never understand where or how to improve the overall acquisition enterprise.

Parting thoughts.

The serious economic reality facing the United States will require policy makers to set aside substantial political differences if they are to place the nation back on a sound footing. While defense cuts alone cannot restore stability, it will not occur without them. Although outside of the purview of DOD, national political leaders will also have to address more difficult issues like the corporate tax structure and entitlement reform to restore the nation's fiscal health and long term viability.

Whether these painful choices happen today or several years from now, the implications to U.S. national security are substantial. The means available to pursue and protect national interests will diminish. This will require policy makers to adjust the national security strategy, and require a shift in strategic thinking to account for the diminished resources. The United States continues to deploy the finest tactical formations, and develops

senior officers who are unrivaled practitioners of operational art. Yet, as Andrew Bacevich has stated, "Since the Vietnam War ended, the tendency among military officers has been to confuse strategy with operations." The time has come to focus our efforts toward developing realistic national and defense strategies that recognize the increasing limitations on our means as an already multi-polar and multi-civilizational world becomes more fragmented. Our senior leaders must be up to that task.

Almost every think tank and national security pundit has offered prospective solutions to wasteful defense spending and strategic overreach. Although there is clearly no shortage of good ideas, focused leadership, partnership with Congress, and tough decisions are required if DOD is to weather the fiscal storm and emerge prepared for the next conflict. As General Gordon R. Sullivan famously said, "Hope is not a method." Then again, *neither is denial*. The current crisis may be exactly the catalyst DOD needs to focus our thinking, overcome bureaucratic inertia, and effect constructive change. Will we seize the opportunity, or blindly defend the status quo?

Endnotes:

¹ Samuel P. Huntington (1996), *The Clash of Civilizations and the Remaking of World*, New York, NY: Simon & Schuster, p.53

² Todd Harrison (February 2011), *The FY2012 Defense Budget: What to Expect in an Age of Austerity*, Washington, DC: Center for Strategic and Budgetary Analysis, p.11

³ Robert C. Pozen (September 19, 2011), *Hot to Bring Our Companies' Foreign Profits Back Home,* New York, NY, The New York Times

⁴ Congressional Budget Office (August 2011), *The Budget and Economic Outlook:An Update*, Washington, DC: CBO, p.28

⁵ Congressional Budget Office (September 13, 2011), Statement of Douglas W. Elmendorf, Director before the Joint Select Committee on Deficit Reduction, U.S. Congress, Washington, DC: CBO, pp.38-39

- ⁸ Stockholm International Peace Research Institute (June 2010), *SIPRI Yearbook 2010 Military Expenditure*, Stockholm, Sweden, SIPRI, p.8
- ⁹ Gideon Rachman, "America Must Manage its Decline," the Financial Times Limited (October 17, 2011), accessed at http://www.ft.com/intl/cms/s/0/0c73f10e-f8aa-11e0-ad8f-00144feab49a.html#axzz1b9FgpXwc
- ¹⁰ Ambassador Eric S. Edelman, "Understanding America's Contested Primacy," Center for Strategic and Budgetary Analysis (2010), p.xiii
- ¹¹ Patrick M. Cronin (June 2010), *Restraint: Recalibrating American Strategy*, Washington, DC: Center for a New American Security, pp.7-11
- ¹² U.S. Department of Defense (January 2012), *Sustaining U.S. Global Leadership: Priorities for 21*st *Century Defense*, Washington, DC: U.S. DOD, p.3
- ¹³ Amy Belasco (March 29,2011), *The Cost of Iraq, Afghanistan, and Other Global War on Terror Operations Since 9/11*, Washington, DC: Congressional Research Service, p.1
 - ¹⁴ Samuel P. Huntington, p.29
- ¹⁵ David Kilcullen (2009), *The Accidental Guerrilla: Fighting Small Wars in the Midst of a Big One*, New York, NY: Oxford University Press, p.287
 - ¹⁶ David Kilcullen, p.20-21
- ¹⁷ Robert D. Kaplan (2010), *Monsoon: The Indian Ocean and the Future of American Power,* New York, NY: Random House, Ebook position: 4244
 - ¹⁸ Robert D. Kaplan, Ebook position 4281
- ¹⁹ Andrew J. Bacevich (2008), *The Limits of Power: The End of American Exceptionalism*, New York, NY: Metropolitan Books, Henry Holt and Company, p.159-160
 - ²⁰ Robert D. Kaplan, Ebook position 5383
- ²¹ U.S. Department of Defense (January 2012), *Defense Budget and Priorities,* Washington, DC: U.S. DOD, p.6,8
- ²² Gary Schaub Jr. and James Forsyth Jr. (May 23, 2010), An *Arsenal We Can All Live With (Op Ed)*, New York, NY: The New York Times

⁶ Stephen Daggett (November 18, 2009), *Congressional Research Service Testimony before the House Armed Services Hearing on Resourcing the National Defense Strategy: Implications of Long-Term Defense Budget Trends*, Washington, DC: CRS, p.2

⁷ Stephen Daggett, p.3

- ²³ Lawrence J. Korb and Alexander Rothman (October 13, 2011), *Open Letter To The Super Committee*, Washington, DC: Center for American Progress, accessed at http://www.americanprogress.org/issues/2011/10/atw super committee.html
- ²⁴ Nathan Freier (October 2011), *U.S. Ground Force Capabilities through 2020*, Washington, DC: Center for Strategic and International Studies, p.8
 - ²⁵ Nathan Freier, p.16
 - ²⁶ David Kilcullen, p.22-23
- ²⁷ Secretary of Defense Robert M. Gates (May 13, 2008), *Remarks at the Heritage Foundation*, Colorado Springs, CO, accessed at http://defenselink.mil/speeches/speech.aspx?speechid=1240
- ²⁸ Michael Hoffman (October 24,2011), "U.S. Army May Cut 22 Percent of Brigades," Springfield, VA: Defense News, p.1
- ²⁹ Lawrence Korb (August 2010), *No Double Standards in Cutting Defense Fat*, accessed at http://www.huffingtonpost.com/lawrence-korb/cutting-defense-fat-requi_b_681488.html
- ³⁰ Air Force Magazine USAF Almanac 2011 (May 2011), *The Air Force in Facts and Figures*, Arlington, VA: The Air Force Association, p.43
 - ³¹ Air Force Magazine USAF Almanac 2011, p.43
- Methodology to estimate personnel cost savings were derived using Office of Management and Budget (2011), *Circular No. A-11, Section 85*, Washington, DC: OMB, p.3, and Congressional Budget Office (January 2012), *Comparing the Compensation of Federal and Private-Sector Employees*, Washington, DC: CBO, p.6 & p.10. The estimate is based on 2,088 compensable hours for a federal employee per year (OMB Circular A-11) and \$32.30 average wages per hour and \$20.10 average benefits per hour in 2010 dollars (CBO report).
 - ³³ Defense Business Board (January 2010), Report to the Secretary of Defense, Washington, DC, p.3-4
 - 34 Nathan Freier, p.14
- ³⁵ David Evans (August 13, 1993), *Humbled Marine Commandant Regrets Edict Curbing Marriage*, Chicago, IL: Chicago Tribune, accessed at http://articles.chicagotribune.com/1993-08-13/news/9308130170_1_mundy-platoon-leaders-first-enlistment
 - ³⁶ David Evans
- ³⁷ Russell Rumbaugh (October 2011), *What we Bought: Defense Procurement from FY01-FY10*, Washington, DC: Stimson Center, p.16
 - ³⁸ Russell Rumbaugh, p.10-11, bracketed information inserted by me for emphasis
 - ³⁹ Russell Rumbaugh, p.16

- ⁴⁰ Todd Harrison (July 2011) *Briefing to SDCFP Fellows titled: Analysis of the 2012 Defense Budget,* Washington, DC: Center for Strategic and Budgetary Analysis, slide titled *Acquisition Costs* 39% is derived from the data on this slide
- ⁴¹ Barry Watts, (October 24, 2011), *Statement Before the House Armed Services Committee*, p.2. Watts was summarizing elements of Jaques S. Gansler (2011), *Democracy's Arsenal: Creating a Twenty-First Century Defense Industry*, Cambridge & London: The MIT Press, p.9,347, 357
- Fred Downey (October 24, 2011), *Testimony to the House Armed Services Committee on the Defense Industrial Base*, Washington, DC: Aerospace Industries Association, p.3
 - ⁴³ Jacques S. Gansler (February 24, 1982), *The Defense Industry*, Cambridge, MA: The MIT Press p.93
- ⁴⁴ Task Force on Defense Acquisition Law and Oversight, Business Executives for National Security (BENS) (July 2009), *Getting to Best: Reforming the Defense Acquisition Enterprise*, Washington, DC: BENS, p.iii
 - ⁴⁵ BENS, p.6.
- ⁴⁶ Jacques S. Gansler (Spring 1990), *Integrating Civilian and Military Industry*, Richardson, TX: Issues in Science and Technology), p.70
 - ⁴⁷ Jacques S. Gansler (May 3, 2011), Statement Before the Senate Armed Services Committee, p.8
- ⁴⁸ President's Blue Ribbon Commission on Defense Management (June 1986), *A Quest for Excellence: Final report to the President*, Washington, DC: PBRCDM, p.46
- ⁴⁹ Barry D. Watts and Todd Harrison (2011), Sustaining Critical Sectors of the U.S. Defense Industrial Base, Washington, DC: Center for Strategic and Budgetary Analysis, p.35
- ⁵⁰ Barry Watts (July 2011) *Briefing to SDCFP Fellows titled: Sustaining Critical Sectors of the Defense Industrial Base,* Washington, DC: Center for Strategic and Budgetary Analysis, slide titled *Recent Cancellations*
- ⁵¹ Barry Watts (July 7, 2011), *Sustaining Critical Sectors of the U.S. Defense Industrial Base,* Washington, DC, Center for Strategic and Budgetary Analysis (Briefing to Secretary of Defense Corporate Fellows)
 - ⁵² Jacques S. Gansler, *The Defense Industry*, p.92
 - ⁵³ Andrew J. Bacevich, p.166